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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,272	03/26/2007	Bruce Alastair Pirrie	089244-000100US	1987

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EXAMINER

JONAITIS, JUSTIN M

ART UNIT	PAPER NUMBER
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3752

NOTIFICATION DATE	DELIVERY MODE
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03/15/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/552,272	Applicant(s) PIRRIE, BRUCE ALASTAIR	
	Examiner JUSTIN JONAITIS	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/27/2009 & 11/23/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 16-21 is/are pending in the application.
- 4a) Of the above claim(s) 6-11, 13 and 16-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. Claims 16-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being- drawn to a nonelected invention, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in the reply filed on 08/27/2009 on the response to the original restriction dated 02/27/2009.

2. Applicant's election with traverse of restriction of invention I (claims 1-13) and invention III (claims 16-21) in the reply filed on 08/27/2009 is acknowledged. The traversal is on the ground(s) that the invention falling into different sub-classes is not fully dispositive and there is no substantial burden on the examiner in reviewing the two sets of claims. Further the claims considerably overlap and scope and may be used together. This is not found persuasive because The inventions have separate status in the art with respect to their different classifications of sub classes, with divergent subject matter wherein claims 1-13 only requires a spray electrode with a focus, and claims 16-21 requiring a pulse pressure wave for the purpose of cleaning the electrode, thus require different field of searches and the prior art that would read on claim 1 would not read on claim 16.

3. Furthermore, claim 1 and 16 are mutually exclusive from each other with both claiming the capillary electrode, and reference electrode, but claim 1 does not claim a mechanism for applying a pulsed pressure wave of claim 16, and vice versa claim 16 does not claim the focus of the electrode of claim 1, thus they do not overlap each other making the scope of the claimed subject matter different.

The requirement is still deemed proper and is therefore made FINAL.

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4. With respect to claims 6-11 that are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 11/23/2009.

5. Applicant's election with traverse of the species restriction in the reply filed on 11/23/2009 is acknowledged. The traversal is on the ground(s) that examiner has not shown two-way distinctness and reasons for insisting on restriction (i.e. serious search burden). This is not found persuasive because examiner has identified the various species as well as linked the particular claims associated with the particular species. While some of the species had overlapping claims, such as species IV-VI, many of the embodiments involve a different type of focus (a rod) or a complete redefining of what exactly the focus is such as the point on the electrode closest to the reference electrode or the point on the electrode furthest from the reference electrode. Each of the species disclosed in the restriction require an entirely different search strategy in order to define the various embodiments disclosed in the figures. None of the embodiments disclosed in the claim would merely be an obvious variation, for example a relocation of parts..

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

6. Claim 13 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 12. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

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Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1 and 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, it's unclear how the rod is attached to the spray electrode. Claim 1 states, "the spray electrode has a focus," and Claim 4 states, "...the focus is a rod adjacent the spray electrode..." It is unclear how a rod adjacent to the spray electrode is part of the spray electrode as claimed in independent claim 1. For examination purposes, examiner will examine the rod according to claim 1, assuming that the rod is an integral portion of the spray electrode and adjacent to the main part of the spray electrode body.

9. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically it's unclear what applicant is intending to claim as the claim does not seem to any further disclose any structure than what was previously disclosed in claim 1. Claim 13 merely includes the limitations of a spray electrode for an electrostatic spray device, which was previously disclosed in claim 1 "An electro static spray device comprising a capillary spray electrode..."

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

11. Claims 1-5 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S.

Patent #3,735,925 to Benedek et al.

Benedek et al discloses an electrostatic spraying device comprising a capillary spray electrode (electrode (1)) having a spraying end (See Figure 1, downstream end to which end piece (6) is attached), and a reference electrode (counter-electrode (4)), the electrodes being connected in use across a generator (power source (2)) in order to establish an electric field between the electrodes and cause fluid in the capillary (space between electrode (1) and dielectric material (5)) to be sprayed from the spray electrode, wherein the spray electrode has a focus (end piece (6) is attached to the spray electrode) that defines a point at which the electric field is focused (end (9), See Figure 1) on the spraying end, wherein the focus is a rod (end piece 6 is a hollow tapered cylindrical rod) that extends beyond the front surface of the spraying end in a direction parallel to the longitudinal axis of the spray electrode, where the end (downstream portion of end piece (6)) has a radius of curvature less than that of the spray electrode (end portion of end piece (6)) is narrower than the cylinder of electrode (1) to which it is connected). The spraying device further including a reservoir in fluid communication with the spray electrode (via supply line (7))

12. Claims 1-2, 4, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S.

Patent #6,776,844 to Yonekura et al.

Yonekura et al. discloses an electrostatic spraying device (See Figure 11) comprising a capillary spray electrode (flying electrode (3)) having a spraying end (at tip 3-1 region), and a reference electrode (Control electrode (32-1)), the electrodes being connected in use across a generator (voltage applying circuit (50)) in order to establish an electric field between the

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electrodes and cause fluid in the capillary to be sprayed from the spray electrode (sprays in the form of a stringy solution beam), wherein the spray electrode has a focus (tip (3-1)) at which the electric field is focused on the spraying end. The focus being a rod adjacent to the spray electrode (tip (3-1) is integral to the spray electrode but adjacent to the main body portion held by electrode holder (4)) extending beyond a front surface (extends beyond the front surface of the electrode holder) in a direction parallel to the longitudinal axis of the spray electrode. The device further including a reservoir (container (7)) in fluid communication with the spray electrode.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #6,776,844 to Yonekura et al.

Yonekura discloses the invention as described above including the rod being rounded, however fails to disclose the radius of curvature being less than that of the spray electrode. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to create a tip-section of smaller diameter, since it has been held that discovering an optimum value of a results effective variable involves only routine skill in the art.

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Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent #4,788,016 to Colclough et al. disclose an electrostatic spray device with similar components including a focus. U.S. Patent #4,830,872 to Grenfell discloses an electrostatic coating blade including a strip of material mounted on the external portion of the electrode for focusing the electric field.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN JONAITIS whose telephone number is (571)270-5150. The examiner can normally be reached on Monday - Thurs 6:30am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JUSTIN JONAITIS/
Examiner, Art Unit 3752

/Dinh Q Nguyen/
Primary Examiner, Art Unit 3752